Town of

AMHERST *Massachusetts*

OFFICE OF THE SUPERINTENDENT OF PUBLIC WORKS
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Department of Public Works
Fiscal Year 2009

Below is the annual report for the Amherst DPW.

I would like to mention the retirement of Matt Loven this year. Matt rose through the ranks of the DPW during his 38 year career and is retiring as the Highway Superintendent. I, as well as the rest of the DPW, wish Matt a happy and long retirement.

Respectfully submitted,

Guilford B. Mooring II, P.E.
Superintendent of Public Works

CONSTRUCTION AND MAINTENANCE

The personnel of the Highway Division in addition to their normal maintenance completed the following projects during FY 09:

HIGHWAY RESURFACING:

The following streets and roads were resurfaced, shimmed or reclaimed this year between July 2008 and June 2009 for a total of 1.9 miles. 1,580 ft of sidewalk was replaced on North Pleasant Street. Concrete sidewalk, streetscapes and curbing were added on North Pleasant Street. The DPW also paved the parking lots of the adjacent businesses at cost. In addition to the resurfacing work DPW crews also placed approximately 412 tons of bituminous asphalt pavement patches.

Reclaimation & 3"Overlay	**From**	**To**	**Length (ft)**	**Width (ft)**
North Pleasant St	Old North Pleasant St	Mass. Ave	1,350	36
Pelham Rd	Heatherstone Rd	Town Line	1,500	24
1.5" Topcoat/Overlay				
Henry St	Market Hill Rd	Shutesbury Rd	5,600	22
Pelham Rd	House #36	Bayberry Ln	1,490	24

SIDEWALK AND STORM DRAINAGE PROJECTS

Downtown Streetscape Improvements (Phase 6) North Pleasant St

The downtown sidewalk improvements continued this year with the following work completed:

New granite curbs - 840 ft;
New concrete sidewalk (8'wide) - 100 cu yds.
New Street Lights & conduit - 4 ea

OTHER PROJECTS:

1. Rolling Ridge Rd and Harlow Dr Sanitary Sewer & Drain replacement;
2. Roadway detail painting at intersections and parking lots;
3. Fearing St Headwall Replacement;
4. Town-wide pavement crack sealing program;
5. Catch basin repairs – 19;
6. Isolated pipe repairs – 8; and
7. Sewer repairs- 4.

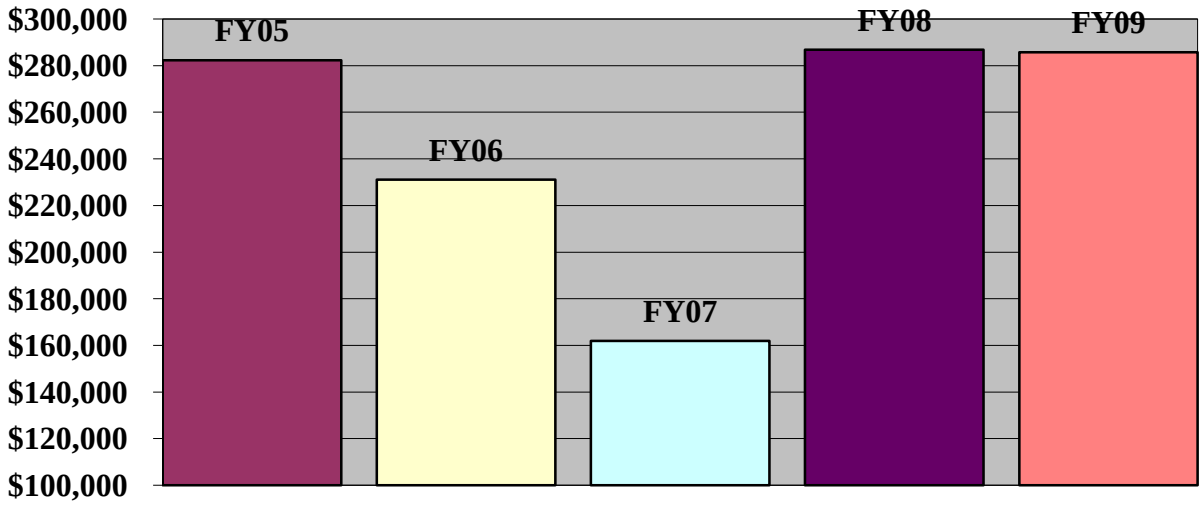
TRANSPORTATION IMPROVEMENT PROGRAM (T.I.P.)

The following TIP projects are underway this year:

1. Design of the Atkins Corner Intersection Improvements;
2. Route 116 Resurfacing Project Design (ARRA funding);
3. University Drive Corridor Improvements;
4. Construction of East Leverett Road Bridge Replacement (Mass Highway) Completed; and
5. Design of Main Street Bridge Replacement (Mass Highway).

SNOW AND ICE REMOVAL

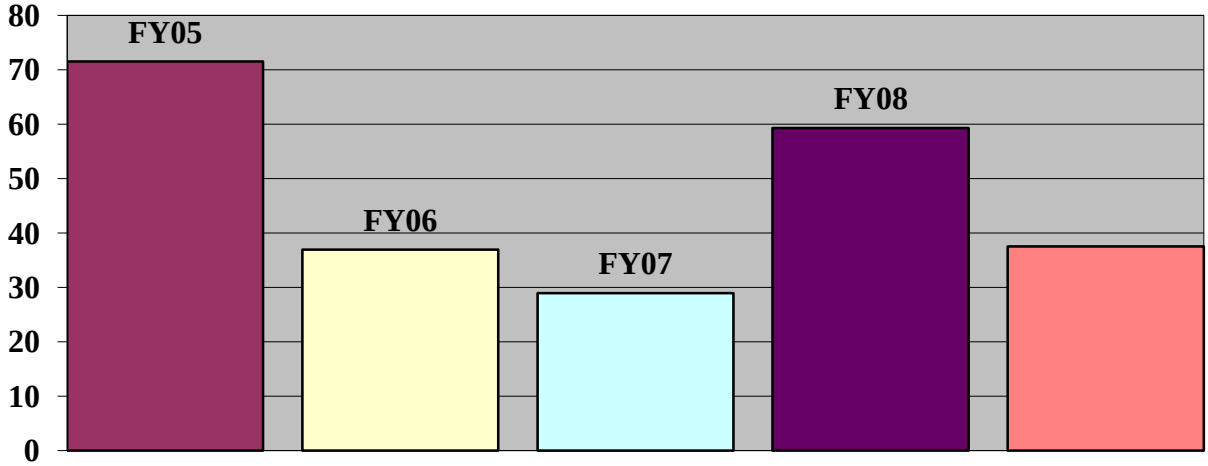
Annual Expenditure



There were 23 snow and ice storms, with a total of 37.5 inches of snow.

4,370 tons of sand was used. 1,431.17 tons of salt was used.
16,454 gallons of Ice Band Magic were used on the roadways and sidewalks.

Inches of Snow



Year	Cost	Snow (inches)	No. of Storms
FY 05	$282,334	71.5	26
FY 06	$231,120	36.9	20
FY 07	$161,930	28.9	15
FY08	$286,777	59.3	23
FY09	$285,733	37.5	23

TREE AND CEMETERY DIVISION

The Tree Division removed a total of 215 street trees during the past year. Trees removed were: 7 norway maple, 36 sugar maple, 23 red maple, 5 silver maple, 12 cherry, 9 ash, 3 american elm, 23 elm, 24 white pine, 23 red pine, 2 red oak, 2 white oak, 2 pin oak, 1 linden, 1 hornbeam, 6 locust, 1 crab apple, 4 poplar, 5 arborvitas, 6 birch, 1 white birch, 1 european beech, 1 catalpa, 4 hickory, 1 willow, 2 hemlock, 2 beech, 5 maple, 1 mountain ash, 1 yellow pine and 1 appletree.

During FY 09, 17 trees were planted.

26 tree stumps were removed in FY 09.

In addition to tree care responsibilities, this department (consisting of three full-time employees and one part-time summer employee) is also responsible for the care and maintenance, including burials at the West, North and South Cemeteries.

Burials in FY 09

West Cemetery	2
North Cemetery	6
South Cemetery	11

PARKS DIVISION

The Parks Division (five full-time employees and two part-time summer staff) continues the day-to-day maintenance of our parks and commons, together with the maintenance of twenty three softball, baseball, football, lacrosse and soccer fields and many multi-purpose areas.

Special Projects: No large special projects were worked on this year due to funding.

SANITARY SEWER DIVISION

SEWER MAINTENANCE

Investigated 70 sanitary sewer complaints and corrected 9 stoppages in the collection system. Problematic sewer locations are flushed and cleaned on a quarterly basis. The DPW in conjunction with Dukes Inc, chemically treated 8,077 feet of sewer line for root intrusion.

Matt Loven/Kenneth Isabelle

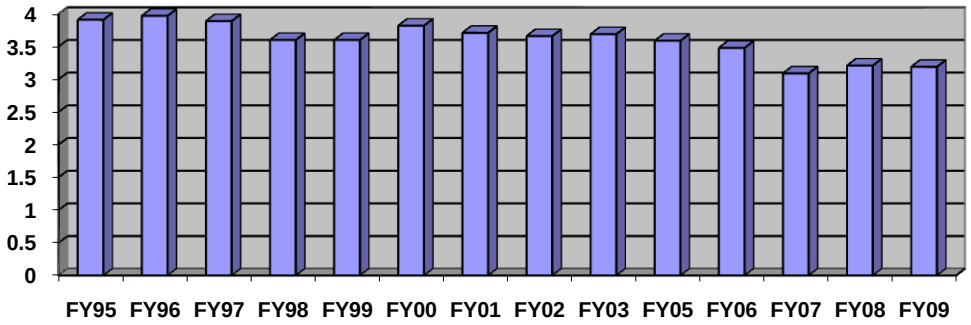
Highway Division Supervisor

WATER TREATMENT & DISTRIBUTION

Water Consumption: The average daily water consumption for FY 09 was 3.19 million gallons; the peak day, September 5, 2008 was 4.505 million gallons. The total FY 09 rainfall was 51.51 inches, well over the annual average of 42 inches. The summer of 2009 was very wet and irrigation activities were limited.

The figures below summarize the amount of water pumped, the revenue generated and the chemicals used to treat the water. Chlorine, ozone and ammonia are used for disinfection. Potassium permanganate is used for iron and manganese removal at Well #4. Polymer is used for water treatment at the Atkins and Centennial water treatment plants. Fluoride is added at a level of 1 part per million to reduce tooth decay and sodium hydroxide is used to elevate the pH of the water for corrosion control.

DAILY WATER CONSUMPTION IN MILLION GALLONS



Water Services

	FY 07	FY 08	FY 09
New services installed	28	15	18
Total water services	6,428	6,225	6,243
# Meters Replaced	238	265	330
Hydrants Replaced/Repair	15	41	96
Water Main Breaks	12	13	23

Chemical Usage - All Sites

Chlorine (lbs.)	18,659	18,577	18,809
Sodium Hydroxide (Gals)	15,171	16,063	15,811
Polymer (gals)	3,189	2,696	2,880
Potassium Permanganate (lbs.)	393	485	1,290
Ammonia (lbs.)	3,266	3,525	3,703
Sodium Fluoride (lbs.)	19,180	16,910	17,705
Ozone	443	887	0

Monthly Finished Water Pumping in Million Gallons

Month	FY 07	FY 08	FY 09
July	101.175	94.780	98.008
August	96.554	97.137	104.836
September	100.685	115.458	112.120
October	103.192	112.647	105.195
November	87.706	93.884	96.835
December	88.556	90.791	90.625
January	79.715	81.109	84.639
February	95.925	94.334	90.614
March	94.104	91.286	92.500
April	96.633	101.070	103.806
May	100.053	102.604	101.620
June	83.838	95.728	82.668
Total	**1,128.14**	**1,170.83**	**1163.466**
Daily Average	3.09*	3.208	3.188
Maximum Daily	4.143 (8/02/06)	4.364 (9/06/2007)	4.505
Minimum Daily	2.241 (11/25/06)	1.894 (8/14/2007)	2.149

	FY 07	FY 08	FY 09
Wells #1 & #2	167	177	191
Well #3	314	340	327
Well #4	44	47	93
Well #5	10	16	3.5
Pelham Reservoirs	316	304	300
Atkins Reservoir	270*	285	246
Total Water Pumped	1,122	1,170	1,163
Average Daily (millions)	3.09	3.208	3.188

*** Quantity adjusted for meter error 200 gpm**

Water Billed – Cubic Feet

	FY 07	FY 08	FY 09
UMass	36,835,279*	37,209,500	40,493,000
Amherst College	5,999,100	6,496,400	5,904,600
Hampshire College	2,667,300	3,138,100	2,616,900
Town	76,752,100	75,599,958	67,690,700
Municipal	1,172,300	1,196,900	1,005,800
Special Water Readings	8,751,000	2,042,700	258,700
Other –Reuse, Misc	538,200	2,565,900	2,744,817
Un-metered Use	5,000,000	5,000,000	10,020,312
Adjustments (minus)	756,600	(875,239)	(1,076,100)
Total Metered (ft^3)	133,468,879	132,374,219	129,658,731
Total Metered (million gals.)	1,001	993	970
% Unaccounted	10.8%	15%	16%

*Adjusted for meter error

Total Revenue Rounded– Dollars

		FY 07	FY 08	FY 09
UMass	Water	$797,273	$1,084,056	$1,290,442
	Sewer	$878,273	$1,114,630	$1,244,796
Amherst College	Water	$146,790	$197,812	$191,855
	Sewer	$159,548	$195,000	$183,136
Hampshire College	Water	$65,010	$95,132	$84,759
	Sewer	$71,618	$94,152	$81,161
Town	Water	$1,837,063	$2,337,082	$2,302,009
	Sewer	$1,813,176	$2,072,189	$1,985,321
Municipal	Water	$31,913	$39,885	$36,258
	Sewer	$32,057	$35,862	$31,152
Special Reading	Water & Sewer	$293,647	$93,790	$72,950
Abatements	Water & Sewer	($60,901)	($43,034)	($75,071)
Other	Water & Sewer	$29,991	0	$9,240
Total Revenue		$6,095,459	$7,316,557	$7,438,007

WATER QUALITY DATA:

Bacterial Samples: Bimonthly samples were analyzed from 24 sites around Town. In August, 2008 one sample was positive for fecal coliform bacteria in North Amherst. Chlorine levels were increased, the water system was flushed and re-sampling showed no contamination.

Fluoride: Fluoride was added to all sources at a level of 1.0 ppm to prevent tooth decay.

Treatment Plant Performance: Both the Atkins and Centennial (Pelham) Water Treatment plants produced water that meet the requirements set by the Environmental Protection Agency (EPA). The average turbidity from Atkins was 0.11 N.T.U. and from Centennial 0.07 N.T.U. The EPA requires that these readings be less than 0.3 N.T.U. in 95% of the samples. Total Trihalomethanes, a byproduct of chlorine disinfection, averaged 33.2 ppb from quarterly sampling at eight different sites around Town. The EPA limit is 80 ppb. Haloacetic acids, another by product of chlorine disinfection, were also analyzed quarterly at 8 different locations and the average value was 40.8 ppm, well below the EPA limit of 60 ppm.

Water Rate: The water rate for FY 09 was $3.20 hundred cubic feet (HCF)

The average water cost to an Amherst resident, based on an annual usage of 120 HCF, is about $388/year. This number is below the State average of $426/120 HCF.

Information: More information about water treatment and quality can be accessed on line at www.epa.gov or www.mass.gov and search for drinking water.

Cross Connection Program: The cross connection program was established in 1989 under Massachusetts Drinking Water Regulation 310 CMR 22.22 to prevent cross contamination of the water supply with hazardous substances. Water department staff test these devices twice annually.

Total Backflow Devices

	FY 07	FY 08	FY 09
Town	57	59	58
UMass	400	440	447
Amherst College	97	106	110
Hampshire College	30	31	33
Commercial	129	130	131
Residential-Irrigation	34	43	60
Total	747	809	839

Chemical Analysis: The following water tests were recently analyzed and all levels of substance in the water were below the Maximum Contaminant Level set by the Safe Drinking Water Act. More information is available online at www.amherstma.gov, go to department – water – ccr.

-Volatile Organic Compounds – Solvents, Petroleum Products
- Inorganic Compounds – tested annually at all sources
- Fluoride – Daily at all sources
- Synthetic Organic Compounds – Herbicides and pesticides - 2006 at all sources
- Arsenic
- Perchlorate
- Radioactive Substances
- Lead and Copper

SPECIAL ACTIVITIES

A. Well 2: A flowmeter was installed on the discharge line of this well to get accurate flow readings. Negotiations were held with MADEP to increase the daily withdrawal of this well and a pump test will be ran in 2010.

B. Water Meter Calibrations: All master meters and source meters were calibrated in 09.

C. Eastman Lane Water Meter: Negotiations began with UMass to replace the water meter at Eastman Lane and North Pleasant Street. Other piping changes will also be made to improve fire flow in the area. The work will be finished in 2010.

D. Protozoa Sampling: Monthly samples were taken at both surface water supplies, sent to the Tufts University lab, and analyzed for Cryptosporidium as part of the Environmental Protection Agency testing program.

E. Centennial Water Treatment Plant: A backwash pump was replaced by Town staff.

F. Leak Survey: DMS Solutions of Marcellus, NY was chosen to carry out a leak survey of the complete water distribution system in FY 10.

G. Fire Flows: The Insurance Services Office (ISO) completed a fire flow study in April, 2009. This type of study is completed about every 10 years to evaluate the structural fire suppression capacity of the Town's water distribution system.

H. Baptist Church Water Meter: This inlet water meter into UMass was replaced by Toomey Water Services with a new 6" Hersey Meter and radio transmitting register.

Robert E. Pariseau
Director of Water Resources

WASTEWATER TREATMENT PLANT

The treatment plant and 21 pumping stations continue to be well-operated and maintained by plant staff.

The plant was constructed in 1978 and no major capital costs are expected in the next few years. Regular plant updates and equipment replacements have kept the treatment facilities current. Many plant improvements have been accomplished by talented plant staff, and resulted in lower operational and capital costs and a sewer rate of $3.10 per hundred cubic feet. Tighe and Bond consulting engineers of Westfield, Massachusetts compiled an extensive, statewide sewer rate survey in 2009. The average cost per household was $584, and the range was $168 to $1,632 based on 90,000 gallons usage annually (120HCF). Amherst sewer costs were less than average at $372 per 120HCF.

Flow Data

The Wastewater Treatment Plant treated 1.56 billion gallons of wastewater in FY 09. The highest daily flow rate recorded was 13.9 million gallons per day on 12/12/08.

	FY 07	**FY 08**	**FY 09**
Inches of Rainfall	42.26	51.77	51.69
Average Daily Flow in Million Gallons	3.97	4.04	4.28
Highest Day, Total in Million Gallons	10.35 (4/16/07)	10.02 (2/13/08)	9.99 (12/12/08)
Chemicals Used			
Chlorine (lbs.)	9,535	9,800	12,496
Polymer (lbs.)	2,999	2,993	3,079
Potassium Permanganate (lbs.)	2,530	2,090	1,705

Chlorine is used to disinfect the wastewater prior to discharge into the Connecticut River. Polymer is used to thicken sludge as part of the disposal process. Potassium permanganate is used for odor control.

Treatment Efficiency

The water that is discharged into the Connecticut River is tested in our treatment plant laboratory. Many process control tests are performed to optimize treatment and produce the best quality effluent possible. The Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (DEP) monitor our activities and measure our effectiveness by the parameters listed below (annual averages). No violations of our EPA discharge permit occurred in FY 09 for the parameters listed. Two exceedances of the fecal coliform limit occurred in August and September. A sampling procedure was modified to remedy the problem.

Parameter	EPA Limit	**FY 07**	**FY 08**	**FY 09**
Biochemical Oxygen Demand (mg/L)	25	6.0	4.0	3.0
Total Suspended Solids (mg/L)	30	4.0	4.0	4.0
Chlorination (mg/L)	1.0	0.40	0.45	0.53

Septage Received

The treatment plant receives septage from residential septic tanks pumped from the Towns of Amherst, Pelham and Shutesbury. Below is a summary of the number of septic tanks (usually 1,000 gallons) that were pumped.

Town	**FY 07**	**FY 08**	**FY 09**
Amherst	68	115	135
Pelham	40	66	52
Shutesbury	72	111	93
Total	180	292	279

Wastewater Reuse

The University of Massachusetts utilizes treatment plant effluent for boiler make-up water at the new central heating plant. About 125 gallons a minute of treated wastewater receives additional treatment and is used to produce steam. This reuse water demand was previously met by utilizing the Town's drinking water.

	FY 07	**FY 08**	**FY 09**
Million Gallons	55	58	65

Sludge Data

Sludge is the residual organic material left after the wastewater is treated. We currently thicken these solids on-site, and Casella Waste Management is under contract to deliver the liquid sludge to an EPA-approved sludge incinerator. Sludge in FY 09 was transported to three incineration facilities: Fitchburg, MA; Millbury, MA; and Naugatuck, CT.

Sludge Data	FY 07	FY 08	FY 09
Total Gallons (transported)	3,901,000	4,126,500	3,970,600
Total Dry Tons	1,052	1,104	1,130
% Solids	6.6	6.6	6.9

Month	Total Gallons	Ave. % Solids	Total Dry Tons	Dry Tons Per Day
July	242,500	6.8	68.40	2.21
August	216,000	6.4	56.03	1.81
September	395,500	7.0	114.32	3.81
October	448,000	6.6	122.30	3.95
November	351,500	7.1	103.98	3.47
December	372,000	7.8	121.79	3.93
January	213,200	7.1	63.07	2.03
February	367,400	6.6	101.40	3.62
March	365,500	6.6	99.82	3.22
April	402,500	6.7	111.73	3.72
May	362,500	6.5	98.75	3.19
June	234,000	7.1	68.52	2.28
Total	3,970,600	0	1,130.11	0
Average	330,883	6.9	94.2	3.10

Power Consumption

	FY 07	FY 08	FY 09
Avg. kWh/month	102,272	104,279	110,850
Avg. kW Demand	354		222
KWH/Million Gallons	847*	848*	851*

*A survey of 279 treatment plants done in 2004 puts Amherst in the lowest 10% for electric use per million gallons of treated water.

Special Activities:

A. Stanley Street Generator: Plans and specifications were prepared to replace the emergency generator at this pumping station. The existing unit was installed in 1976 and replacement parts are no longer available. Town staff will do the replacement in FY 10.

B. Rolling Ridge Sewer Project: Camp, Dresser & McKee, consulting engineers, will assist the Town in preparing plans and specifications to replace a section of undersized sewer on Harlow Drive and Rolling Ridge Road. The work will be done in FY 10.

C. Hydrosep Drive: Town staff prepared bid documents, purchased and installed a replacement drive on Hydrosep #1. This was an original equipment (1978) replacement and the work was done for less than $18,000, at a considerable savings to the Town.

D. Aeration Tank Weirs: Treatment plant staff fabricated and installed 6 aeration tank weirs. These devices control the tank and oxygen levels in the treatment units.

E. Plant Security System: A new card identification and security system was installed at the main treatment plant by Signet Electronic Systems, Inc.

F. Electrical Work at Main Plant: Our talented electrical staff is aggressively replacing our original system controls with fiber optics and computer-based controls. In FY 09, controls were replaced on the following systems: Influent pumping, Primary Sludge pumping, Tank Drainage, Chlorination, Aerator and Dissolved Oxygen and Influent Plant flowmeters. This work was all done by plant staff at considerable cost savings to the Town.

Robert E. Pariseau
Director of Water Resources

FY 09 Solid Waste and Recycling Annual Report

In light of the Recycling Coordinator's four-month leave of absence in the fall of 2008, the FY 09 solid waste and recycling program focused on maintaining existing projects and nurturing future ones. In addition to ongoing collaboration with the Health Department, The Energy Task Force, the school district's contracted food service provider (Whitson's), and the Amherst Area Chamber of Commerce, one of our key goals was revising the Board of Health Regulations for Waste and Recycling to clarify several issues and facilitate enforcement.

Grants Awarded

The Massachusetts Department of Environmental Protection's (DEP) Municipal Waste Reduction Grant awarded Amherst 20 rain barrel discount vouchers valued at $200, but the program was cancelled due to funding issues and none were received. Amherst was awarded $2,000 from the Springfield Materials Recycling Facility (MRF) Advisory Board to purchase a trailer to facilitate downtown public area recycling. Delivered in June 2009, the 4'x8' single axle trailer was to be used by the Parks Department to allow simultaneous trash and container recycling collection downtown. However, due to a difficult budget year, the DPW could not commit to the new project in FY 10. Instead the trailer will be used to pick up recycling from the Common after public events. By fall, 2009 the DPW will have new procedures in place offering fee-based trash and recycling collection services for events held on the common. Money from the MRF grant was also used to purchase five event bottle/can recycling collection containers and five 96 gallon wheeled toters for the project.

Outreach and Public Education

General Amherst Population

Renewable Energy Fair – For the third year in a row, members of the Recycling and Refuse Management Committee (formerly the Solid Waste Committee) participated in this early September event on the Town Common. Informational brochures about recycling, composting, and waste reduction were provided and recycling and compost bins were available for sale. Informational posters and a simple quiz question about plastic bottles were also highlight of the booth. Those able to answer the quiz received a small prize.

Earth Day – Due to resource limitations, Amherst Grows Green was put on the back burner this year. The Recycling and Refuse Management Committee erected a booth on South Pleasant side of the South Common along with the Shade Tree Committee on April 25 in honor of Earth and Arbor Day, and provided information about waste stream reduction. We're pleased to announce in 2010 a combined green event will be held on the Common on April 24. Organizers from The Renewable Energy Fair, the Chamber of Commerce and Amherst Grows Green are joining forces to form a single "green" event (title as yet undetermined) in Amherst.

Taste of Amherst – The recycling coordinator again assisted with this year's Taste of Amherst event. There were special challenges this year, as the drink vendor and provider of refrigerators and recycling bins since the event's inception, chose not to participate. The organizers were able to get another vendor, but recycling bins were not available to us with limited notice. Rain threatened the event, potentially rendering the cardboard trash (and gerry-rigged recycling) containers useless. We located clear trash bags in which to enclose the cardboard bins to prevent

waste bin "meltdown." Chamber of Commerce Director Tony Maroulis is interested in "greening" the event in 2010, gradually moving to a Styrofoam-free policy and eventually adopting composting (similar to what the Orange Garlic Festival has accomplished and the Franklin County Fair is working toward).

Schools and Youth Education

Composting Program – The composting program continued successfully at two of the four elementary schools. Both the custodial team and the school administrators at Wildwood and Marks Meadow continue to be strong supporters, a factor critical to the program's success. TTT Trucking out of Brattleboro, Vermont continues to pick up the food waste weekly and transport it to Martin's Farm in Greenfield.

Crocker Farm Elementary School employee Ricci Mastroianni developed an onsite composting program at Crocker Farm. What started from a single kindergarten classroom project has developed into a school-wide program, where students sort their compostable and non-compostable food waste, and set aside their milk cartons which are later rinsed and recycled. Currently, food waste is placed in an Earth Machine composter on-site. Working with the school's parent group, Ms. Mastroianni secured a grant to build a larger composting bin, which will be based on an animal-proof model developed by Karen DiFranza for Hubbardston, MA schools. If the sanitation and wild animal concerns of the district's facilities director are overcome, the onsite program has exciting implications for school waste stream reduction in the future. Food waste is often the heaviest component of trash. Separating and composting vegetable-based food waste will reduce waste tonnage, hauling costs and garbage truck emissions, and provide an exciting curriculum opportunity. The finished compost will help maintain and beautify school grounds. The current Crocker Farm principal is supportive of the project, while the school's head custodian has doubts because of a failed past program. The key to continued success appears to be getting a school to embrace and have ownership of the project so the program's success is not dependant on a single person. Curriculum development around composting, similar to Connecticut's model linking it with state curriculum standards, would ensure the future success of school composting.

Trash-Free Lunch Day – The third annual "Trash-Free Lunch Day" was again a success in terms of student/employee waste stream awareness at the four elementary schools. Whitsons, the new district food service provider, was happy to collaborate with DPW, as had been their predecessor. This year Crocker Farm Elementary School swooped out from behind and took the prize for the least amount of trash generated. The school's 257 students reduced their normal lunchtime trash by 45% to an astounding ¾ pound of trash, an equivalent of .22 cubic inches per student. Wildwood Elementary School beat its previous record by 11% with the equivalent of .29 cubic inches per student. These results were only achievable because of the schools' composting programs, which reduce the weight and volume of cafeteria trash. In conjunction with Trash-Free Lunch Day, the DPW purchased 60 reusable "Wrap-n-mat" sandwich wraps and sold them at cost at several elementary schools. This may be a project that school parent groups will be interested in organizing in the future.

On a related note, Whitsons responded to the ecological request on the District's 2008 request for proposal by making a cafeteria Styrofoam® avoidance commitment this year. A special effort was made to wash trays quickly, and only paperboard disposable trays were used. Wildwood and Marks Meadow Schools were able to collect the paper trays and add them to their compost, greatly reducing their trash volume throughout the year.

Additional Initiatives

Board of Health Refuse and Mandatory Recycling Regulation Change
An Amherst business claiming that they could not recycle because their waste hauler did not offer container recycling prompted careful review of the Regulations for Refuse Collection and Mandatory Recycling. The existing regulations (approved 12/05) do not clearly state that waste haulers must offer *both* commercial and residential clients container and paper recycling services. Proposed changes to the regulations were submitted to the Board of Health (BOH) in June 2009, and we anticipate that they will be approved at the July 18, 2009 BOH meeting. Other changes to the regulations include:

- Updated definitions (Section 3);
- A new regulation concerning haulers and roadside litter (and related fines);
- Clarification of banned waste items that must be excluded from weekly household trash collection;
- A new regulation regarding use of public trash/recycling receptacles for disposal of private or business refuse (and related new fines);
- Clarification of owner/manager/tenant responsibility to separate recycling, and ensure appropriate disposal of banned, electronic and hazardous waste;
- A new regulation governing acceptable time frames for removal of excess/bulky trash (and related new fines); and
- Clarification of responsibility of owner/manager/tenant to reimburse the Town for costs of correcting/cleaning up violations.

Reduce Recycle Reuse Earth Day Newspaper Insert
Lobbying efforts were successful in getting the Reduce Reuse Recycle insert included in the Amherst Bulletin in 2009. Originally funded via a grant from the Springfield Materials Recycling Facility Advisory Board, the Earth Day insert was included only in the Franklin County Recorder, the Springfield Republican and the Hampshire Gazette during its first publication year (2008). The insert provides regional waste disposal information, including recycling and hazardous waste collection information. Amherst's Recycling Coordinator has been a contributor since its inception. Plans for the 2010 issue include improved graphic design, a heavier focus on reuse (repair and second-hand options), composting and a kids' activity page.

Solar Trash Compactors Installed Downtown
Two solar trash compactors, purchased with funds from the Massachusetts Technology Collaborative Renewable Energy Trust's Clean Energy Choice Grant, were installed in downtown Amherst in May 2009. The Big Belly® compactors have the same footprint as a 32 gallon trash can, but provide a capacity five times greater via compaction, potentially reducing collection time, fuel cost, and greenhouse gas emissions. The compactors are constructed of steel and plastic with a leak-proof trash bin and a photovoltaic system that recharges its 12 volt battery. An LED sensor monitors capacity and uses 1,250 pounds of force in a 41 second compression cycle.

Waste Collection and Landfill Diversion
Curbside pickup of trash and recyclables in Amherst continues to be provided by private trash haulers, however, households requesting variances are allowed to bring their recycling and trash directly to the Transfer Station in pre-paid bags. This fiscal year 540 households received trash variances.

Earth Machine composting units, kitchen counter compost pails, recycling bins, and sharps collection containers continue to be available for purchase at the Transfer Station. Residents were able to purchase rain barrels, despite unavailability of DEP discount vouchers. Rain barrels were offered to Amherst residents at the bulk rate of $73 and distributed in April from the DPW parking lot on Route 116.

In FY 09 the medical waste hauler destroyed 176.3 pounds of Sharps collected by Amherst's Health Department and Transfer Station, an increase of 58% over FY 08. MassDEP has announced a Sharps landfill disposal ban effective in July 2010, and the recycling coordinator and the Town's public health nurse anticipate that state collection programs may render existing municipal ones superfluous.

The Recycling Center and Transfer Station supports many other landfill diversion programs. Sterling Bush, a Transfer Station employee and Recycling and Refuse Management Committee member, organized a successful new Styrofoam pellet and egg carton reuse program at the Transfer Station. The collected material is used by local businesses and individuals. The following items are also accepted at no charge from residents with current vehicle stickers:

Clothing (goes to Salvation Army);
Automotive and rechargeable batteries;
Waste automotive oil;
Leaves & grass clippings;
Christmas trees;
Printer cartridges & cell phones;
Mixed containers;
Mixed paper; and
Mercury-bearing items such as thermometers & thermostats.

The option to donate return deposit drink containers to the local food bank continues with a designated bin. Fluorescent bulbs, brush, electronics, household solid waste (bulky items), construction/demolition waste, scrap metal, asphalt, bricks, concrete, wood, paint, tires, appliances and propane tanks are all accepted for recycling/disposal after payment of fees.

Types and quantities of materials diverted via the Transfer Station over a four-year period are shown in the table below. The FY 06 spike in collected paint is attributed to a paint collection procedure change in FY 05.

	FY 06	**FY 07**	**FY 08**	**FY 09**
Electronics (tons)	31	32	30	33
Scrap Metal (tons)	242	216	153	126
HHW in household equivalents	116	130	156	61
Paint (gallons)*	2,119	1,854	1,532	1,443
Tires (count)	559	757	461	517
Appliances	870	854	609	535
Propane Tanks	106	139	56	53

* Oil-based paint and paint products known to contain lead are only accepted during HHW collection days.

The Take It or Leave It and Book Sheds, which allow vehicle sticker owners to swap books and household items, remain very popular. Parking at the Transfer remains challenging when bargain-hunters linger at the two sheds on busy spring, summer and fall days. The Book Shed roof has developed leaks and the Recycling and Refuse Management Committee is researching low-cost repair options.

The spring household hazardous waste (HHW) collection event was not held this year due to Mass DEP delays and funding challenges. Henceforth, the DPW will hold a single event in the fall of each year. As in past years, residents of Hadley, Leverett, Pelham and Shutesbury will continue to partner in the event via a resource/cost-sharing agreement.

Conclusion

Exciting advances were made during FY 09, despite a slow start to the fiscal year. We are hopeful that the combined green event (Spring 2010) will prove to be a great public education and relationship-building opportunity, and that the DPW entering the refuse removal on the Town Common will prove lucrative. The new Board of Health regulations, once communicated to licensed waste haulers and landlords, will help enforce mandatory recycling, trash overflow violations, and proper disposal of material banned from Massachusetts landfills. Finally, on-site school recycling efforts, if expanded, will offer money and resource-saving potential for the Town. The key challenge remains building and administering these solid waste programs with limited resources.

Susan Waite
Recycling Coordinator